



10 DIGIT DESKTOP
CALCULATOR



E 680-2 (260A)

BEFORE OPERATING YOUR CALCULATOR

Your calculator operates from two D size batteries. To conserve battery power, it can also be operated using LLOYD'S AC Adaptor Model Y204 (120V/60Hz) only.

HOW TO CHANGE BATTERIES

To change batteries, make sure the power switch is in the "OFF" position. Remove the battery access cover from the bottom of the calculator by sliding it toward the top of the calculator. Remove and discard the old batteries.

When inserting new batteries, observe the battery polarity. The (+) pole of each battery must correspond with the (+) indication in the battery compartment. Damage to the calculator can be caused by incorrect placement of the batteries.

A dimly lighted display is an indication that the battery voltage is low. This is the time to replace the batteries with fresh ones. If the batteries become too low, the calculation will no longer be possible.

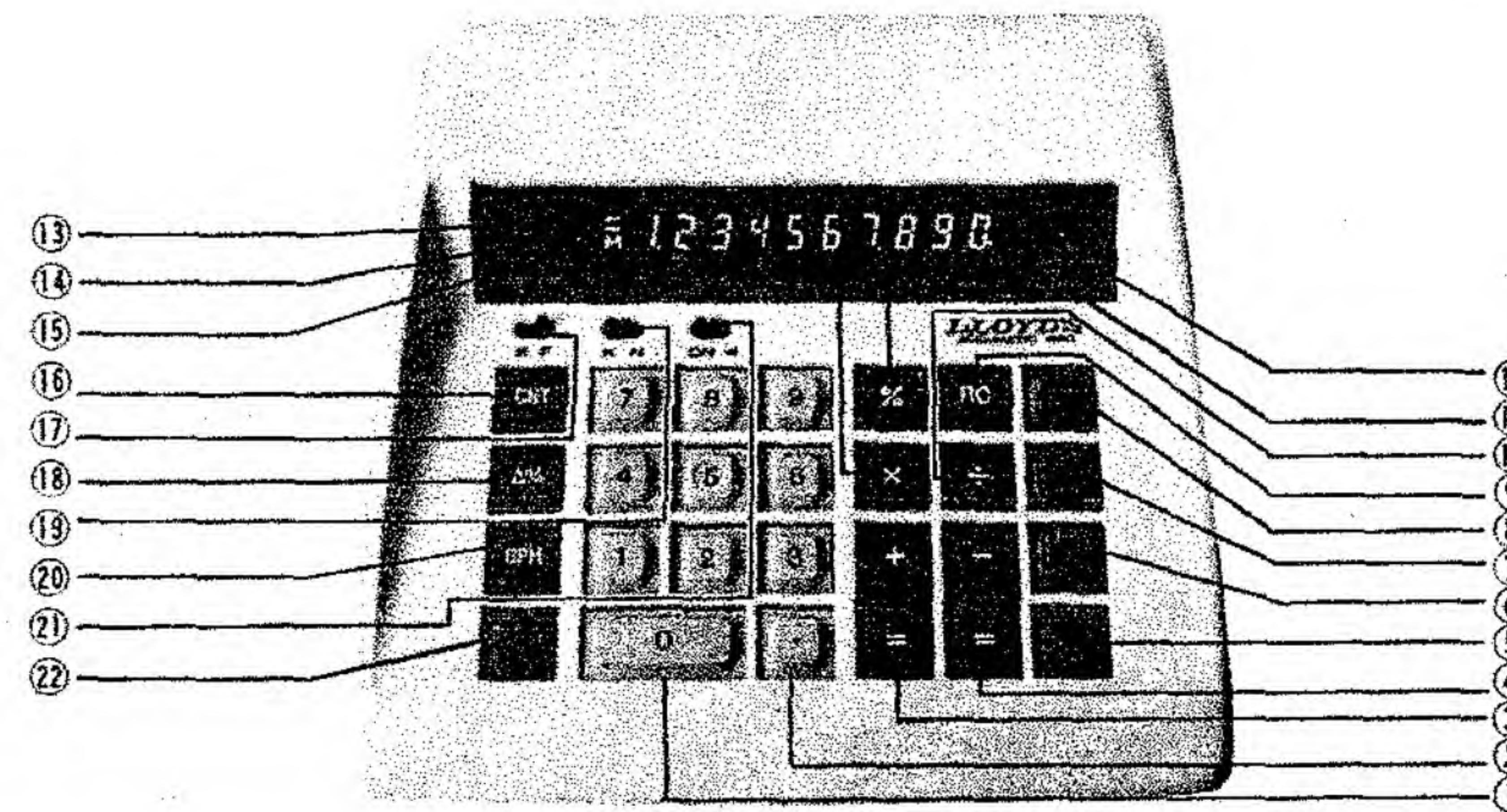
HOW TO USE THE AC ADAPTOR

Your calculator may also be operated from AC with the use of LLOYD'S AC Adaptor Model Y204 (120V/60Hz). If the calculator is being used on AC only over long periods of time, the batteries should be removed to prevent possible damage from battery leakage.

CAUTION: When the calculator is not in use, disconnect the AC Adaptor from the AC outlet and from the calculator.

KEYBOARD ORGANIZATION

The following is a brief explanation of the function of each key and indicator found on the keyboard of the Accumatic TM680-2.



1. DIGIT ENTRY KEYS

[0] through [9] : Pressing one of these keys will enter that digit into the rightmost display position. Previously entered digits will be shifted one position to the left.

2. DECIMAL POINT ENTRY KEY

[.] : Depression of this key will correctly position the decimal point in your entries.

3. PLUS EQUAL KEY

[+] : Depression of this key performs addition, and multiplication or division if the multiply or divide command has been previously entered.

4. MINUS EQUAL KEY

[−] : Depression of this key performs subtraction, or negative multiplication or division if the multiply or divide command has been previously entered.

5. MEMORY PLUS KEY

[M+] : Adds the contents of the display (X) register to the contents of the memory. The display (X) register and all previous operations are unaffected by this operation.

6. MEMORY MINUS KEY

[M−] : Subtracts the contents of the (X) register from the contents of memory. The (X) register and all previous operation are unaffected by this operation.

7. MEMORY RECALL KEY

[RM] : Recalls the contents of memory to the display without clearing the memory.

8. MEMORY CLEAR KEY

[CM] : Clears the memory (sets memory contents to zero) without disturbing other calculator modes or register.

9. REGISTER EXCHANGE KEY

[RC] : Depression of this key exchanges the contents of the display (X) register and the constant (Y) register.

10. DIVISION KEY

[÷] : Depression of this key tells the calculator to perform the division.

11. PERCENT KEY

[%] : Depression of this key causes the number on the display to be expressed as a percentage.

12. MULTIPLY KEY

[×] : Depression of this key tells the calculator to perform the multiplication.

13. OVERFLOW (ERROR) INDICATOR

This indicator is located in the leftmost display position. Any answer or subtotal exceeding ten digits to the left of the decimal point, overflow indicator "←" lights and only a zero, in the rightmost position, will appear on the display.

Depression of the clear **[CE/C]** key will reset the calculator.

14. NEGATIVE NUMBER INDICATOR

This indicator "−" is located in the leftmost display position and lights whenever negative numbers or credit balances are displayed.

15. MEMORY INDICATOR

This indicator is "M" which will light in the leftmost display position whenever memory contents are non-zero.

16. ITEM COUNT KEY

[CNT] : Depression of this key counts the number of the times **[+]** or **[−]** key depressed.

17. DECIMAL PLACE SELECTION SWITCH

Selects 2 decimal places on the "2" position and floating on the "F" position.

18. PERCENTAGE DIFFERENCE KEY

[△%] : Performs the percentage difference calculation (ratio of increase or decrease) such as $\frac{A-B}{B} \times 100$ in sequence of B **[△%]** A **[=]**.

19. CONSTANT SWITCH

Sets the constant calculation mode. The first factor for multiplication and the second factor for division are set for constant number.

20. GROSS PROFIT MARGIN KEY

GPM: Performs gross profit margin calculation such as $\frac{A-B}{A} \times 100$ in sequence of B **GPM** A **EE**.

21. ON/OFF POWER SWITCH**22. CLEAR AND CLEAR ENTRY KEY**

CE: Depression of this key performs the following functions:

1. Resets error or overflow indicator. This does not clear the display or memory. Press **CE** ONCE.
2. Clears the display register (wrong entry). Previous entries and the arithmetic mode set are not affected. Press **CE** ONCE.
3. Two successive depressions of the clear **CE** key will clear all registers EXCEPT the memory register.

MACHINE CAPACITY

1. The Capacity of the machine is 0.000000001 to 9,999,999.999 (10^{-9} to $10^{10}-1$).
2. The calculator displays whole numbers up to 10 digits.
3. The calculator displays decimal numbers up to ten digits. For decimal answers exceeding ten digits, the least significant decimal digits are automatically suppressed to prevent overflow.
4. The calculator displays numbers less than 1 up nine digits. A zero always appears to the left of the decimal point if the number is less than one.

EXAMPLE PROBLEMS

The following example problems show you how easy it is to use the Accumatic TM680-2 Calculator.

The calculator should be turned on using the power switch. When the calculator is 'On', a zero will appear in the rightmost display position. You are now ready to begin.

ADDITION AND SUBTRACTION

Example: $123 + 456 - 789 = -210$
(Decimal Switch: F, Constant Switch: N)

ENTRY	DISPLAY	COMMENTS
123	123	
EE	123	
456	456	
EE	579	
789	789	
EE	-210	

MULTIPLICATION

a) Example: $12 \times 15 = 180$
(Decimal Switch: F, Constant Switch: N)

12	12
EE	12
15	15
EE	180

b) Example: $123 \times 5 \times (-0.5) = -307.5$
(Decimal Switch: F, Constant Switch: N)

123	123	
EE	123	
5	5	
EE	615	
.5	0.5	No Need to Key-in Leading Zero
EE	-307.5	Negative Indicator Lights

DIVISION

a) Example: $149 \div 12 = 12.41666687$
(Decimal Switch: F, Constant Switch: N)

ENTRY	DISPLAY
149	149
\div	149
12	12
$=$	12.41666687

COMMENTS

b) Example: $1 \div 3 \div (-0.3) = -1.11$
(Decimal Switch: 2, Constant Switch: N)

ENTRY	DISPLAY
1	1
\div	1
3	3
\div	0.333333333
.3	0.3
$=$	-1.11 Negative Indicator Lights

MIXED CALCULATION

Example: $(1200 + 30) \times 4 \div 3 = 1640$
(Decimal Switch: F, Constant Switch: N)

ENTRY	DISPLAY
1200	1,200
$+$	1,200
30	30
$=$	1,230
\times	1,230
4	4
$=$	4,920
3	3
$=$	1,640

PERCENTAGE

Example: 5% of 30 = 1.5
(Decimal Switch: F, Constant Switch: N)

ENTRY	DISPLAY
30	30
\times	30
5	5
$\%$	1.5

COMMENTS**AUTOMATIC MARK-UP**

Example: A\$47.25 Purchase Plus 4% Tax
(Decimal Switch: F, Constant Switch: N)

ENTRY	DISPLAY
47.25	47.25
\times	47.25
4	4
$\%$	1.89
$=$	49.14

AUTOMATIC DISCOUNT

Example: A\$15.25 Item Discounted 20%
(Decimal Switch: F, Constant Switch: N)

ENTRY	DISPLAY
15.25	15.25
\times	15.25
20	20
$\%$	3.05
$=$	12.2

COMBINED MARK-UP, DISCOUNT

Example: A\$31.25 Item Discounted 20% Plus 5% Tax.
(Decimal Switch: F, Constant Switch: N)

ENTRY	DISPLAY	COMMENTS
31.25	31.25	
	31.25	
20	20	
	8.25	20% of 31.25
	25	Discounted Price
	25	
5	5	
	1.25	5% of 25
	26.25	

REPEATED OPERATIONS**ADDITION**

Example: $20+4+4+4=32$

(Decimal Switch: F, Constant Switch: N)

20	20	
	20	Sets Add Mode
4	4	
	24	$20+4$
	28	$20+4+4$
	32	$20+4+4+4$

SUBTRACTION

Example: $18-3-3-3=9$

(Decimal Switch: F, Constant Switch: N)

18	18	
	18	Sets Subtract Mode
3	3	
	15	$18-3$
	12	$18-3-3$
	9	$18-3-3-3$

MULTIPLICATION

Example: $4\times 4\times 4\times 4=256$

(Decimal Switch: F, Constant Switch: K)

ENTRY	DISPLAY	COMMENTS
4	4	
	4	Sets Multiply Mode
	16	4×4
	64	$4\times 4\times 4$
	256	$4\times 4\times 4\times 4$

DIVISION

Example: $2\div 2\div 2\div 2=0.25$

(Decimal Switch: F, Constant Switch: K)

2	2	
	2	Sets Divide Mode
	1	$2\div 2$
	0.5	$2\div 2\div 2$
	0.25	$2\div 2\div 2\div 2$

CONSTANT OPERATION**MULTIPLICATION**

Example: $4\times 3=12, 4\times 5=20$

(Decimal Switch: F, Constant Switch: K)

4	4	
	4	Sets Multiply Mode
	3	
	12	
	5	
	20	

DIVISION

Example: $6 \div 2 = 3$, $8 \div 2 = 4$
(Decimal Switch: F, Constant Switch: K)

ENTRY	DISPLAY	COMMENTS
6	6	
	6	Sets Divide Mode
2	2	
	3	
8	8	
	4	

POWERS

Example: $2^4 = 16$
(Decimal Switch: F, Constant Switch: K)

ENTRY	DISPLAY	COMMENTS
2	2	
	2	Sets Multiply Mode
	4	2^2
	8	2^3
	16	2^4

RECIPROCAL

Example: $1/4 = 0.25$
(Decimal Switch: F, Constant Switch: K)

ENTRY	DISPLAY
4	4
	4
	1
	0.25

REGISTER EXCHANGE

Example: $\frac{15}{2+3} = 3$
(Decimal Switch: F, Constant Switch: N)

ENTRY	DISPLAY	COMMENTS
2	2	
	2	
3	3	
	5	$2+3$
	5	
15	15	
	5	Exchange X and Y Registers.
	2	

MEMORY OPERATION

This example is used to illustrate the various memory features. You buy 5 of item A for \$.25 each and 6 of item B for \$.75 each. You return for credit 2 of item C at \$.15 each.

(Decimal Switch: F, Constant Switch: N)

ENTRY	DISPLAY	COMMENTS
5	5	
	5	
.25	.25	
	1.25	Cost of item A. Memory Indicator Lights
6	6	
	6	
.75	.75	
	4.5	Cost of item B. Adds Cost of item B to item A in Memory
2	2	
	2	

ENTRY	DISPLAY	COMMENTS
15 [$\frac{+}{-}$] [M-]	0.15 0.3 0.3	Credit for Item C. Subtracts Item C from A & B in Memory
[RM] [EM]	5.45 5.45	Total Sale Clears Memory (Memory Indicator Goes Out)
[CEC]	0	

GROSS PROFIT MARGIN OPERATION

Example: Find % of margin for the item cost price \$4.50 and selling price \$5.00
(Decimal Switch: F, Constant Switch: N)

4.5 [GPM]	4.5
5	5
[$\frac{+}{-}$]	10

PERCENTAGE DIFFERENCE OPERATION

Example: Find % of cost increase for the item of the original price \$.20 and new price \$.25
(Decimal Switch: F, Constant Switch: N)

.2 [$\Delta\%$]	0.2
.25	0.25
[$\frac{+}{-}$]	25

ITEM COUNT OPERATION

Example: $6+6+6+6=24$
(Decimal Switch: F, Constant Switch: N)

ENTRY	DISPLAY	COMMENTS
6 [$\frac{+}{-}$] [$\frac{+}{-}$] [$\frac{+}{-}$] [$\frac{+}{-}$] [CNT]	6 6 12 18 24 4	
[CEC]	0	This number shows [$\frac{+}{-}$] key was depressed at 4 times.

ENTRY CORRECTION

Example: $5+3=8$
(Decimal Switch: F, Constant Switch: N)

5 [$\frac{+}{-}$] 4 [CEC] 3 [$\frac{+}{-}$]	5 5 4 0 3 8
	Should Have Been 3

RECOVERY TECHNIQUES

Occasionally during calculations, an undesired function key may be depressed. Should this happen, simply push the proper function key and continue.

OVERFLOW AND ERROR INDICATIONS

Whenever the capacity of the machine is exceeded, or an impossible calculation is attempted, the error indicator in the leftmost display position will light.

The error conditions relevant are:

1. Depressing $\boxed{+}$, $\boxed{-}$, $\boxed{\times}$, $\boxed{\div}$, where the magnitude of the result is greater than 9,999,999.999.
2. Depressing $\boxed{M+}$ or $\boxed{M-}$ where the magnitude of the result in memory is greater than 9,999,999.999.
3. Division by zero.

LIMITED WARRANTY

Lloyd's Desk Top Calculators are warranted against defects in material and workmanship for a period of ninety (90) days, beginning from the date of purchase by original purchaser.

Should the unit fail under normal usage during the ninety (90) day period of warranty, it must be returned, freight prepaid to:

Lloyd's Service
18601 South Susana Road
Compton, California 90221

Lloyd's Electronics Ltd.
857 York Mills Road
Don Mills, Ontario M3B 1Y2
Canada

Lloyd's Service
180 Raritan Center Pkwy.
Edison, New Jersey 08817

Lloyd's Electronics Ltd.
11 Plymouth Street
Winnipeg, Manitoba R2X 2V5
Canada

Lloyd's Electronics Ltd.
4445 Garrand Street
Ville St. Laurent, Quebec

Lloyd's Electronics Ltd.
7854 6Th St
Burnaby, B.C.
V3N 3N3
Canada

The original sales invoice is the only acceptable proof of warranty entitlement and must therefore accompany the returned unit.

This warranty does not apply to any products which have been repaired by unauthorized persons in any way, so as, in our judgment, to reduce their performance or reliability or which have been subject to misuse, abuse, neglect or accident.

This warranty gives the purchaser specific legal rights in addition to any other rights which vary from state to state.

APPLICABLE TO U.S.A. ONLY

In accordance with the "Moss-Magnuson Warranty Act" of July 10, 1975, this is termed a "Limited" Warranty which in no way compromises Lloyd's high standards of quality and workmanship.